

WHAT IS CLAIMED IS:

1. A urinal having a dual-phase flush cycle, comprising:

5 a fixture having a rear wall, said rear wall having a mounting surface and a urinal surface with an elongate channel defined therebetween along a longitudinal extent of said rear wall, coextensive sidewalls protruding normally outwardly from said urinal surface and terminating at a curved bowl portion of said fixture, each sidewall having a generally planar inner surface in parallel alignment with an inner surface of a sidewall spaced therefrom, said urinal surface and
10 said sidewall inner surfaces defining an ingress for an internally defined containment area in which at least one atmospheric vacuum breaker (AVB) and at least one valve means are disposed, said valve means being in electrical communication with a sensor and having a first fluid discharge port in fluid communication with the bowl portion and a second fluid discharge port, wherein, upon detection of the user, said sensor transmits a first signal to said valve means
15 to initiate a first water exchange phase of the flush cycle during which said valve means discharges water through said first fluid discharge port along said elongate channel to remove waste from said bowl portion, and said sensor, after a predetermined delay, transmits a subsequent second signal to said valve means to initiate a wall-scouring phase of the flush cycle during which said valve means discharges water from said second fluid discharge port along said
20 urinal surface.

2. A urinal according to claim 1, wherein said rear wall has an upper extent that accommodates ingress of a pre-existing water supply conduit therein and a lower extent that accommodates egress of a pre-existing waste conduit therefrom.

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3. A urinal according to claim 2, wherein said elongate channel extends from said upper extent to said lower extent.

4. A urinal according to claim 2, wherein said lower extent accommodates an outlet
30 adapter in communication with said urinal and said waste conduit.

5. A urinal according to claim 4, wherein said sidewalls extend along the length of said rear wall from said ingress to said bowl portion.

6. A urinal according to claim 1, wherein said urinal surface and said sidewall inner surfaces together delineate an ingress that provides access to said containment area.

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7. A urinal according to claim 1, further comprising a tank cover detachably affixed to said fixture so as to prohibit access to said containment area.

10 8. A urinal according to claim 1, wherein said bowl portion includes inner and outer surfaces defining a fluid well therewithin.

9. A urinal according to claim 8, wherein said fluid well, said rear wall and said sidewalls together define an interior waste capture portion that receives fluid therewithin and directs fluid 15 to a fluid drain disposed in said bowl portion.

10. A urinal according to claim 9, wherein said fluid drain is in fluid communication with said waste conduit via a trapway disposed therebetween.

20 11. A urinal according to claim 9, wherein a strainer device is disposed in or adjacent said drain.

12. A urinal according to claim 1, further comprising a visible trap seal in said bowl portion, said trap seal having a predetermined static water level.

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13. A urinal according to claim 12, wherein said static water level is 2".

14. A urinal according to claim 1, wherein said fixture is fabricated from a material selected from porcelain, ceramic, plastic, and metal.

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15. A urinal according to claim 1, wherein said fixture has one or more treatments applied

thereon, said treatments selected from coatings or glazes having one or more of hydrophobic, hydrophilic, anti-microbial, antibacterial, biocidal, odor suppressing, anti-viral and algicidal properties.

5 16. A urinal according to claim 1, wherein said valve means is selected from (1) a pair of first and second solenoid valves with each of said first and second solenoid valves having respective first and second fluid discharge ports provided therewith, and (2) a single solenoid valve having first and second fluid discharge ports provided therewith.

10 17. A urinal according to claim 1, wherein said sensor intermittently generates and transmits said first and second signals simultaneously in accordance with predetermined parameters such that said second wall scouring phase occurs only when said parameters are met.

15 18. A urinal according to claim 17, wherein said predetermined parameters are selected from the group of parameters consisting of the passage of a predetermined temporal duration, use of said urinal by a predetermined number of users, absence of users for a predetermined temporal duration and any combination thereof.

20 19. A urinal according to claim 1, wherein said sensor generates said first signal after fulfillment of a condition selected from the group of conditions consisting of passage of a predetermined temporal duration, detection of said user within a predetermined distance of fixture, detection of the absence of said user after a predetermined temporal duration and any combination thereof.

25 20. A urinal according to claim 1, wherein said urinal surface includes a urinal spreader comprising a plurality of apertures that evenly distribute water across said urinal surface.